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November, which shows very fairly in its outline parts of the brighter nebulosity, but the photograph clearly shows that these form part of an irregular oval nebula of gigantic dimensions. It is more than two degrees in length from north to south, and forty-seven minutes of arc in breadth on the following side of 52 *Cygni*, which it barely touches by a slight projection. The nebulosity is of a very faint streaky character, excepting that which was seen by Sir John Herschel. The nebula as a whole is not symmetrical, but seems to be made up of detached patches of light covering the large area, and a much longer exposure than four hours will be required to show the connections of these diffused patches of light. It will be observed on examination of the photograph that the stars on the *following* side of 52 *Cygni* are very much more numerous than they are on the *preceding* side. The bright part of the nebula seems to form almost a defined boundary between the stream of the Milky Way stars and those on its *preceding* side. The straight line across 52 *Cygni* was caused by a sudden gust of wind during the exposure of the plate.

Photograph of η Argûs. By H. C. Russell.

I think the photograph sent herewith, which is an enlargement of one of our photographs of η *Argûs*, taken with the star camera and 5¾ hours' exposure, will be interesting to the members of our Society. The scale is 12·4 inches = 1°; and it brings out in a satisfactory way most, but not all, that the negative contains. The scale is five-sixths of that adopted by Herschel in the Cape observations, and a comparison of the two is very suggestive. In the denser parts I have counted over 100 stars in a square inch, or more than 3500 stars in a degree, and in some places they run up to 130 in a square inch, upwards of 4500 in a degree, and the enlargement has lost many of the fainter stars visible on the negative. The mottled appearance of the nebula and its vast extent are strikingly brought out. The scale in the original negative is not large enough to divide some of the close groups, hence they appear in the enlargement as one star.

Sydney Observatory :
1892 *April* 11.

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Orbit of 9 *Argûs*, *β* 101. By Professor S. Glasenapp.

(*Letter from Professor S. Glasenapp to S. W. Burnham.*)

The complete measures of 9 *Argûs*, which I have had the honour to receive from you, have enabled me to investigate the orbit of this interesting binary star. I find for this system a period of 40·54 years. The eccentricity is extraordinarily small, being only 0·09.

The following table contains the measures of 9 *Argûs*, made by Dembowski (Δ), the Astronomers at the Cincinnati Observatory (Cin.), Burnham (*β*), Hall (Hl.) and Schiaparelli (Sp.)

1875·71	289°·4	0″·46	Δ	3*n*
1878·47	302·6	0·45	Cin	4*n*
1878·52	301·8	0·46	*β*	1*n*
1879·68	306·2	0·38	Hl	2*n*
1882·21	319·7	0·35	Sp	4*n*
1883·11	336·2	0·3	*β*	1*n*
1889·08	76·4	0·34	*β*	4*n*
1890·19	83·0	0·4	Sp	2*n*
1890·26	84·6	0·31	*β*	4*n*
1890·96	88·3	0·36	*β*	3*n*
1891·15	94·7	0·3	Sp	1*n*
1892·05	98·7	0·22	*β*	3*n*

From these observations we form the annual means for 1878, 1890, and 1891, assigning to the two measures of distance made by Professor Schiaparelli in 1890 and 1891 a weight equal to one-half, and thus obtain the following normal places:—

1875·71	289°·4	0″·46	1888·26	356°·1	0″·29
78·50	302·2	0·45	89·08	76·4	0·34
79·68	306·2	0·38	90·22	83·8	0·34
82·21	319·7	0·35	91·06	91·5	0·34
83·11	336·2	0·30	92·05	98·7	0·22

By the graphical method we obtain the geometrical elements of the true orbit as follows:—

$☊_0 = 116^{\circ}{\cdot}6$ $\qquad e_0 = 0^{\circ}{\cdot}105$

$i_0 = 55{\cdot}8$ $\qquad a_0 = 0''{\cdot}48$

$\lambda_0 = 252{\cdot}3$

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